

Practical Software and Systems Measurement

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A foundation for objective project management



***DACS-USC Data Repository
Workshop***

14 July 2011

Jo Ann Lane and Tom McGibbon

PSM Users Group Conference

11-15 July 2011

Mystic, CT

DACS-USC Repository

- **Goal of repository**
 - **Maintain**
 - **Actual quantitative data from software and systems engineering projects**
 - **More qualitative lessons learned and heuristics data**
 - **Support user queries**
 - **Statistical summaries for effort and schedule based on software or systems engineering size inputs and cost model parameters**
 - **Lesson learned and heuristics by pre-defined categories/subjects**
- **Goal of workshop**
 - **Obtain suggestions for repository design/structure/capabilities**
 - **Identify ways to get industry/government/vendor participation**

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Workshop Participants

- ***Jo Ann Lane – USC***
- ***Tom McGibbon – DACS***
- ***Adrian Pitman – Australian DMO***
- ***Don Beckett – QSM***
- ***Denton Tarbet – Galorath***
- ***Ilya Lipken – USAF/SIMS PO***
- ***Brad Clark – USC-SMI***
- ***Anthony Powell – York Metrics***
- ***Angela Tuffley – SQL***
- ***Pete McLoone – Lockheed Martin***

Summary

- *Reviewed demo of repository prototype*
- *Considerable discussion of*
 - *Data sources*
 - *Additional information to include about projects*
 - *Quality/confidence level of data*

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Conclusions, Recommendations, and Results

- ***Repository is needed to support rough order of magnitude estimates and research***
- ***Repository contents***
 - ***Several expressed desire to establish data counting rules/standards for repository but agreed that we should include what is generally available now***
 - ***Recommend defining desired metadata***
 - ***Key data information/features***
 - ***Data age***
 - ***Ability to retire old data***
 - ***Include context information***
 - ***Delineate new projects from enhancements/upgrades to existing systems***
 - ***General agreement that contextual information (e.g., cost model parameter values/classifications) should be included, but lack of information should not necessarily exclude data sets***
 - ***Data validation extremely important going forward***
 - ***“Lessons Learned” data may not be as important as quantitative information***

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Conclusions, Recommendations, and Results ***(continued)***

- ***Repository data sources***
 - ***ISBSG data generally thought to be a good starting point for the repository while to capture data from other sources***
 - ***Historical SRDR data may be difficult to work with—updated data collection forms may provide better data***
- ***Repository analysis***
 - ***Methods for qualifying submitted data be defined/documented***
 - ***Desirable to remove outliers for analysis***
 - ***Desirable to identify actual data point (size input) of interest in scatter charts/other relevant charts***
- ***Need disaster recovery plan in place (USC has one, but will revisit to make sure it is sufficient)***
- ***Need to work on incentives to get people to contribute data***
 - ***Point system based upon number of accepted data submission that allows users receive custom reports from repository***
 - ***Profile/analysis of organization's historical data within the repository***

Next Steps/Action Items

- ***Continue efforts to develop repository***
- ***Will use LinkedIn to continue discussions/survey of interested persons/organizations in a DACS discussion subgroup***
- ***Work with SEER to obtain research-only version of ISBSG data (as part of USC research version of SEER cost model) for further evaluation***
- ***Continue work to update USC affiliate agreements to determine what USC cost model data can become part of repository***
- ***Continue to work with government cost agencies to obtain SRDR data***